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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/681,026
	Filing Date	October 8, 2003
	First Named Inventor	Lu et al.
	Art Unit	2681
	Examiner Name	Not Yet Known
Total Number of Pages in This Submission	Attorney Docket Number	I-2-0412.1US

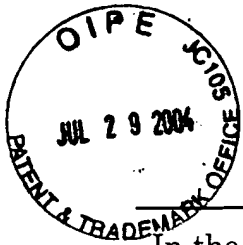
ENCLOSURES (Check all that apply)		
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☐ Fee Attached	☐ Licensing-related Papers	☐ Appeal Communication to Board of Appeals and Interferences
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☐ Information Disclosure Statement	☐ CD, Number of CD(s) _____	
☐ Certified Copy of Priority Document(s)	Remarks	
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Steven J. Gelman Volpe and Koenig, P.C. Reg. No. 41,034
Signature	
Date	July 27, 2004

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I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.	
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Date	July 27, 2004

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Lu et al.

Application No.: 10/681,026

Confirmation No.: 6193

Filed: October 8, 2003

For: INFORMATION STORAGE FOR
RADIO RESOURCE MANAGEMENT

Group: 2681

Examiner: Not Yet Known

Our File: I-2-0412.1US

Date: July 27, 2004

**COMMUNICATION RE FAVORABLE IPER BY
IPEA/US IN CORRESPONDING INTERNATIONAL APPLICATION**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is to advise the Examiner of the favorable International Preliminary Examination Report (IPER) issued by the United States Patent and Trademark Office acting as International Preliminary Examination Authority in a corresponding international application. A copy of the IPER is enclosed.

The original PCT claims correspond to the claims in this U.S. application. A copy of the approved claims as published is also enclosed.

Applicant: Lu et al.
Application No.: 10/681,026

In view of the fact that PCT claims 1-21 have all been found to meet the international standards of patentability, prompt examination and allowance are respectfully requested.

Respectfully submitted,

Lu et al.

By 
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SJG/slp
Enclosures (2)

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

VOLPE & KOENIG, P.C.

To:
STEVEN J. GELMAN
VOLPE AND KOENIG, P.C.
UNITED PLAZA, SUITE 1600
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PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing
(day/month/year)

30 JUN 2004

Applicant's or agent's file reference

I-2-0412.1WO

IMPORTANT NOTIFICATION

International application No.

PCT/US03/31981

International filing date (day/month/year)

08 October 2003 (08.10.2003)

Priority date (day/month/year)

09 October 2002 (09.10.2002)

Applicant

INTERDIGITAL TECHNOLOGY CORPORATION

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US

Mail Stop PCT, Attn: IPEA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference I-2-0412.1WO	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US03/31981	International filing date (<i>day/month/year</i>) 08 October 2003 (08.10.2003)	Priority date (<i>day/month/year</i>) 09 October 2002 (09.10.2002)	
International Patent Classification (IPC) or national classification and IPC IPC(7): H04M 3/00; H04L 1/00; H04Q 7/20 and US Cl.: 455/ 560, 561, 422.1, 424, 436, 439, 445, 450, 515, 522, 509; 370/ 310, 328-330, 345, 347, 349, 337			
Applicant INTERDIGITAL TECHNOLOGY CORPORATION			
1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet. ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <u>0</u> sheets. 3. This report contains indications relating to the following items: - I ☒ Basis of the report - II ☐ Priority - III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability - IV ☐ Lack of unity of invention - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement - VI ☐ Certain documents cited - VII ☐ Certain defects in the international application - VIII ☐ Certain observations on the international application			
Date of submission of the demand 05 May 2004 (05.05.2004)		Date of completion of this report 17 June 2004 (17.06.2004)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230		Authorized officer Kamran Afshar Telephone No. 703-305-7879 	

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/31981**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)

Claims 1-21 YESClaims NONE NO

Inventive Step (IS)

Claims 1-21 YESClaims NONE NO

Industrial Applicability (IA)

Claims 1-21 YESClaims NONE NO**2. CITATIONS AND EXPLANATIONS**

Claims 1-12 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest that the radio resource management function for managing radio resources, using data from a central database, including cell data and wireless transmit/receive unit (WTRU) data; said cell data including resource assignment information for a cell; and said WTRU data including WTRU capability and WTRU radio link information.

Claims 13-20 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest that the method comprising the steps of: providing a data storage; storing resource allocation information for the wireless communications system in the data storage; accessing the data storage by a RRM function, wherein the RRM function obtains current resource allocation information for the wireless communications system; performing the RRM function; and updating the data storage based upon changes to the resource allocation in the wireless communications system made by the RRM function.

Claim 21 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest that the method comprising the steps of initializing the central database; receiving operations and maintenance (OA&M) data.; storing the OA&M data in the central database; triggering the CAC routine; retrieving cell data and wireless transmit/receive unit data from the central database, the retrieved data to be used by the CAC routine; executing the CAC routine and allocating resources to the newly admitted call; and storing information regarding the resources allocated to the newly admitted call in the central database.

----- NEW CITATIONS -----

NONE

CLAIMS

What is claimed is:

1. A controlling radio network controller (C-RNC) for use in radio resource management (RRM) functions, the C-RNC comprising:

a radio resource management function for managing radio resources, using data from a central database, including cell data and wireless transmit/receive unit (WTRU) data;

said cell data including resource assignment information for a cell; and

said WTRU data including WTRU capability and WTRU radio link information.

2. A controlling radio network controller according to claim 1, wherein said cell data includes a cell record having

a cell identification field;

a cell status field;

a timeslot record for each timeslot;

a cell-based operations and maintenance configuration data field;

call admission control function parameters; and

a power control information field.

3. A controlling radio network controller according to claim 2, wherein each timeslot record includes

a timeslot number field;

a channel type field;

a channel direction field;

a list of allocated codes;

an available resource units field; and

a code vector field.

4. A controlling radio network controller according to claim 3, wherein said list of allocated codes includes a cell code record having

- a dedicated physical channel identification field;
- a code number field;
- a WTRU identification field;
- a radio link identification field; and
- a coded composite transport channel identification field.

5. A controlling radio network controller according to claim 3, wherein said code vector field includes an uplink code vector record having

- a code identification field;
- a code block status field; and
- a code usage status field.

6. A controlling radio network controller according to claim 3, wherein said code vector field includes an downlink code vector record having

- a code identification field; and
- a code usage status field.

7. A controlling radio network controller according to claim 1, wherein said WTRU data includes a WTRU record having

- a WTRU identification field;
- a WTRU capability field; and
- a radio link information field.

8. A controlling radio network controller according to claim 7, wherein said radio link information field includes a radio link record having

- a radio link identification field;
- a cell identification field;
- an uplink coded composite transport channel (CCTrCH) information field;

and

- a downlink CCTrCH information field.

9. A controlling radio network controller according to claim 8, wherein said uplink CCTrCH information field and said downlink CCTrCH information field include a CCTrCH record having
- a CCTrCH identification field; and
 - a dedicated physical channel (DPCH) information field.
10. A controlling radio network controller according to claim 9, wherein said DPCH information field includes a DPCH record having
- a repetition period field;
 - a repetition length field; and
 - a DPCH timeslot list.
11. A controlling radio network controller according to claim 10, wherein said DPCH timeslot list includes a DPCH timeslot record having
- a timeslot number field;
 - a midamble shift and burst type field;
 - a transport format combination indicator presence field; and
 - a code list.
12. A controlling radio network controller according to claim 11, wherein said code list includes a WTRU code record having
- a DPCH identification field;
 - a code usage status field;
 - a CCTrCH identification field;
 - a code number field; and
 - a code signal to interference target field.
13. A method for improving the performance of radio resource management (RRM) functions in a wireless communications system, comprising the steps of:
- providing a data storage;

storing resource allocation information for the wireless communications system in the data storage;

accessing the data storage by a RRM function, wherein the RRM function obtains current resource allocation information for the wireless communications system;

performing the RRM function; and

updating the data storage based upon changes to the resource allocation in the wireless communications system made by the RRM function.

14. The method according to claim 13, wherein the providing step includes providing a centralized data storage in a controlling radio network controller.

15. The method according to claim 13, wherein the storing step includes storing operation and maintenance data in the data storage.

16. The method according to claim 13, wherein the storing step includes storing cell-specific data in the data storage.

17. The method according to claim 13, wherein the storing step includes storing wireless transmit/receive unit-specific data in the data storage.

18. The method according to claim 13, wherein the RRM function is a call admission control routine.

19. The method according to claim 13, wherein the RRM function is an escape mechanism.

20. The method according to claim 13, wherein the RRM function is a background interference reduction function.

21. A method for improving the performance of a call admission control (CAC) routine by storing commonly used data in a central database, the method comprising the steps of:

- initializing the central database;
- receiving operations and maintenance (OA&M) data;
- storing the OA&M data in the central database;
- triggering the CAC routine;
- retrieving cell data and wireless transmit/receive unit data from the central database, the retrieved data to be used by the CAC routine;
- executing the CAC routine and allocating resources to the newly admitted call; and
- storing information regarding the resources allocated to the newly admitted call in the central database.